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TITLE : LITHIUM ION BATTERY

ABSTRACT : PROBLEM TO BE SOLVED: To suppress the generation of gas in a battery and to minimize the expansion of the battery by using mixed lithium salt of lithium salt and LiPF_6 as the solute of an electrolyte, and specifying the ratio of LiPF_6 .

SOLUTION: An exterior body made of metal aluminum or an aluminum alloy and having the thickness of 0.4 mm or below is provided. A positive electrode using a lithium-containing composite oxide (LiCoO_2 or the like) as a positive electrode material, a negative electrode using a carbon material (graphite) having the (d) value (d_{002}) of 3.40 \AA or below on the lattice plane (002) as a negative electrode material, and an electrolyte made of a solvent and a solute are stored in the exterior body to form a lithium ion battery. Mixed lithium salt of the lithium salt $[\text{LiN}(\text{C}_2\text{F}_5\text{SO}_2)_2]$ expressed by formula $\text{LiN}(\text{C}_n\text{F}_{2n+1}\text{SO}_2)_2$ and LiPF_6 is used for the solute of the electrolyte, where (n) is an integer of 2 or above, and the ratio of LiPF_6 in the mixed lithium salt is set to 20 mole % or below.

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